

## New Reared Species of *Lygocerus* Foerster (Hymenoptera: Ceraphronidae)

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Species of *Lygocerus* are most commonly associated with sternorrhynchous Homoptera, especially aphids and mealybugs, and to a lesser extent chermids and psyllids. They develop either as hyperparasites through other Hymenoptera that are primary, or as parasites of predatory larvae such as those of Syrphidae (various genera) and Chamaemyiidae (especially *Leucopis* and *Cremanifania*). Other recorded hosts include Coniopterygidae and species of the dipterous genera *Phytophaga* and *Meromyza*.

Although specimens have been reared abundantly the Nearctic species have never been critically studied taxonomically. Apparently most of them are undescribed. Five species for which names are desired are described here. Two of these were reared from *Leucopis*, two as hyperparasites of aphids and one from a hemerobiid.

### *Lygocerus leucopidis*, new species

In some respects this is very similar to *pacificus* Ashmead but it is immediately distinguished by the relatively short scape of the female antenna which does not nearly attain the vertex of the head, whereas the scape of female *pacificus* extends conspicuously above the vertex. It differs further in the stouter antennal flagellum, and in having the petiole of the abdomen closely, longitudinally striate. In *pacificus* the petiole is nearly smooth, with only a few weak striae.

*Female*.—Length 1.5 to 2 mm. Head seen from above twice as broad as long; frons gently convex and at its narrowest point narrower than eye height, strongly shagreened and dull; width of temple at narrowest point less than length of antennal pedicel; first segment of antennal flagellum a little longer than pedicel and much less than half as long as scape; at least some of the flagellar segments less than twice as long as broad; vertex

sculptured like frons; ocellocular line at least one and one-half times the diameter of an ocellus.

Thorax stout, slightly narrower than head; mesoscutum nearly or quite twice as broad as long and, together with scutellum, sculptured like frons and vertex; notaulices and median furrow of mesoscutum complete and sharply impressed; mesopleuron coriaceous and dull.

Abdomen at widest point slightly wider than thorax; petiole of abdomen coarsely, longitudinally striate, the middle striae more than half as long as scutellum.

Black; basal half of scape and, in the larger specimens, all legs reddish yellow, with the hind coxae, femora and tibiae more or less piceous or blackish; in the small specimens the legs more extensively black; anterior wing hyaline with a fuscous cloud below stigmal vein.

*Male*.—Differs from the female in its broader frons, clear hyaline wings and very different antennae, which are as illustrated.

*Type*.—U. S. National Museum No. 64574.

*Type-locality*.—Albany, CALIFORNIA.

Described from 11 females and 12 males reared by Fred D. Bennett from purparia of *Leucopis* sp. in June and July, 1958. The host larvae were preying on aphids living on *Cottonaster*, *Pyracantha* and *Salix*.

### *Lygocerus pinicola*, new species

This is rather similar to *leucopidis*, but it may be readily distinguished from that species by its more slender form, and especially by its much narrower head.

*Female*.—Length 1.5 to 2 mm. Head relatively long and narrow, much less than twice as wide as long viewed from above; frons evenly convex, and at narrowest point distinctly narrower than eye height; frons and vertex strongly shagreened and sub-opaque; ocellocular line barely longer than longest diameter of an ocellus; scape attaining level of vertex; first flagellar segment about one-third as long as scape; flagellar segments 2 to 8

shorter, less than twice as long as broad; width of temple at narrowest point less than length of antennal pedicel.

Mesoscutum only a little broader than long, sculptured like the head, and with sharp, complete notaulices and a narrow but sharply impressed median groove; scutellum and mesopleuron sculptured like mesoscutum. Abdomen not wider than thorax, the petiole coarsely, longitudinally striate.

Black; antenna, including scape, entirely black; anterior wing hyaline with a very faint cloud below radius; legs piceous to black, the anterior pair sometimes brownish yellow in front.

*Male*.—Like the female except that the wings are entirely clear hyaline, the frons is relatively broader, and the basal flagellar segments are deeply serrate as illustrated.

*Type*.—U. S. National Museum No. 64575.

*Type-locality*.—Berkeley, CALIFORNIA.

Described from 3 females and 1 male reared at the type locality from *Leucopis atrifacies* Aldrich on Monterey pine, by Fred D. Bennett, June 20, 1958, and 1 male taken on foliage of Monterey pine at San Rafael, Marin Co., California, in June, 1958.

### *Lygocerus latifrons*, new species

This species differs strikingly from the two species described above in its relatively much wider frons and its long malar space, which is much more than half as long as an eye.

*Female*.—Length 2 to 2.3 mm. Head more than twice as wide as long viewed from above; frons at narrowest point conspicuously wider than eye height and slightly concave below middle of eyes; frons and vertex finely granulate and mat; width of temple at narrowest point greater than length of antennal pedicel; antennae longer than head and thorax combined; scape extending far above level of vertex; first flagellar segment twice as long as pedicel and half as long as scape, much longer than any of the following segments, but all flagellar segments at least twice as long as broad.

Thorax stout but a little narrower than head; mesoscutum finely granular, three-fourths as long as wide; notaulices and

median groove sharply impressed and complete; scutellum flattened medially and finely granulose except at sides where it is more or less rugulose; mesopleuron coriaceous, shining. Abdomen at widest point slightly wider than thorax; petiole strongly longitudinally striate.

Black; antennae more or less brownish; wings clear hyaline, no fuscous cloud in anterior wing; legs largely yellowish brown, with coxae, femora and tibiae sometimes more or less piceous.

*Male*.—Like the female but with the frons even relatively wider, and with the antennae a little more slender and the scape much shorter. Unlike the male antennae of most species of *Lygocerus* those of this species do not have the basal flagellar segments serrate.

*Type*.—U. S. National Museum No. 64576.

*Type-locality*.—Escondido, CALIFORNIA.

Described from 6 females and 4 males reared from hemerobiid cocoons by D. W. Clancy in June, 1936.

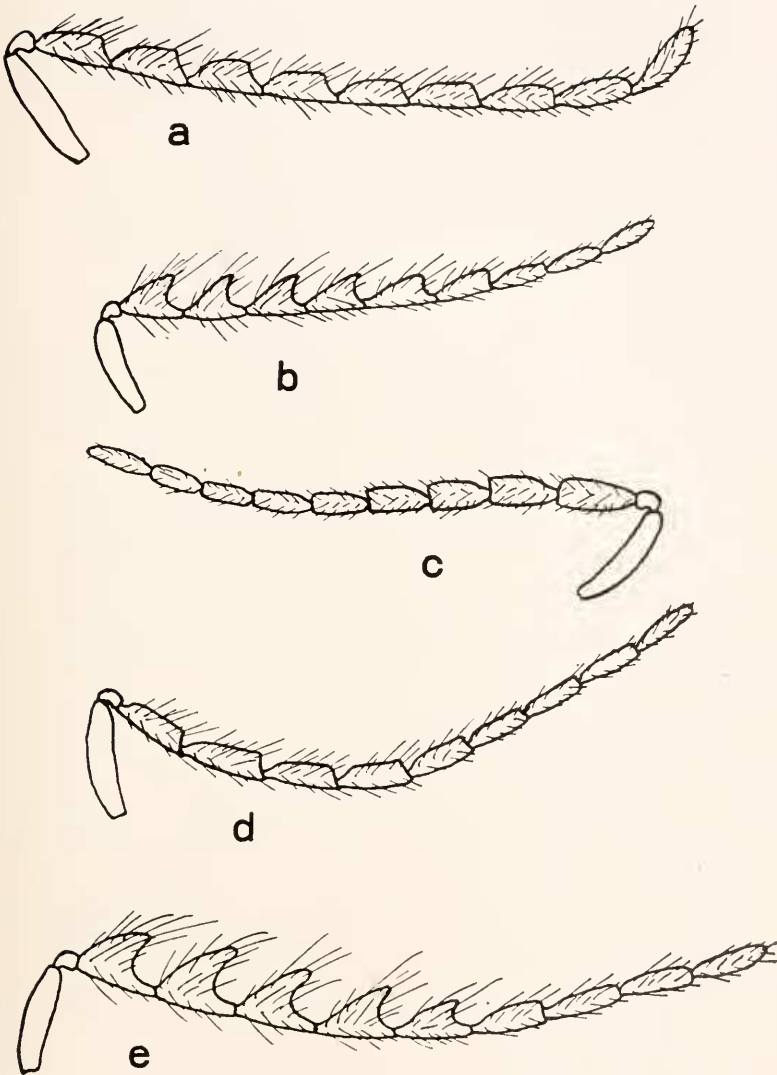
#### *Lygocerus attentus*, new species

In the structure of the female antennae and in the color of the legs this species resembles *floridanus* (Ashmead), but it differs widely in other respects, especially in the decidedly narrower frons, in the clouded anterior wing of the female, and in the more weakly serrate male antennae.

*Female*.—Length about 1.7 mm. Head seen from above more than twice as wide as long; frons at narrowest point not wider than eye height; frons and vertex coriaceous and subopaque; scape of antenna extending a little above vertex; first flagellar segment longer than pedicel or second flagellar segment; width of temple at narrowest point much less than length of pedicel.

Thorax slightly narrower than head; mesoscutum about twice as wide as long, with notaulices and median groove sharply impressed and complete; mesoscutum and scutellum coriaceous and subopaque; mesopleuron finely coriaceous and shining. Abdomen a little wider than thorax; base (petiole) of second tergite with short and coarse striae.

Black; base of scape brownish yellow; anterior wing with a conspicuous fuscous cloud across middle; legs yellowish brown,



Male antenna of: a, *Lycocerus attentus*, new species; b, *L. leucopidis*, new species; c, *L. latifrons*, new species; d, *L. incompletus*, new species, and e, *L. pinicola*, new species.

with coxae, hind femora and hind tibiae more or less blackish.

*Male*.—Antennae slender, flagellar segments 1 to 6 very weakly serrate; frons wider than eye height; all coxae, trochanters and femora black; otherwise essentially like the female.

*Type*.—U. S. National Museum No. 64577.

*Type-locality*.—Aroostook County, MAINE.

Described from 8 females and 3 males reared from *Macrosiphum solanifolii* (Ashmead) by W. A. Shands in 1953.

### **Lygocerus incompletus**, new species

Distinguished from all described North American species by its incomplete notaulices. In that character it approaches *Dendrocerus* Ratzeburg, but in other details and in habitus it is like *Lygocerus* and I believe its correct placement is in this genus.

*Female*.—Length about 1.4 to 1.7 mm. Head twice as wide as long viewed from above; frons at narrowest point slightly wider than eye height; frons and vertex coriaceous and shining; width of temple at narrowest point much less than length of pedicel; scape of antenna extending noticeably above vertex; all flagellar segments at least twice as long as broad, the first and last the longest.

Mesoscutum and scutellum sculptured like frons; median groove of mesoscutum sharply impressed and complete; notaulices impressed only anteriorly, not attaining middle of mesoscutum; mesopleuron weakly coriaceous and shining. Abdomen wider than thorax; petiole with short and strong striae.

Black; antennal scape brownish yellow at extreme base; wings entirely clear hyaline; legs brownish yellow, with coxae, hind femora and hind tibiae more or less infuscated.

*Male*.—Antennae long and slender, basal flagellar segments weakly serrate; all femora somewhat infuscated; otherwise essentially like the female.

*Type*.—U. S. National Museum No. 64578.

*Type-locality*.—Aroostook County, MAINE.

Described from 26 females and 8 males reared from *Macrosiphum solanifolii* (Ashmead) by W. A. Shands in 1953.